## REMARKS

Drawing Objections

The Specification has been amended to address the objections to the drawings as set out in the Office Action. Specifically, Applicant points out that element (105) is mentioned in paragraph [0037] as originally filed. Paragraph [0037] has been amended to refer to element (101). This amendment is submitted to add no new matter. Paragraph [0038] has been amended to change the reference to element (120) to a reference to element (119). Applicant submits that these amendments to the Specification address all of the objections to the drawings.

Claims

Claims 1-6, 8-25 and 27-42 are pending after this amendment.

Compliance of Claims with 35 U.S.C. §112

The Office Action objected to Claim 1 on the basis that it is not clear how the second node can be both a root node and between the first node and the root node. Paragraph [0029] of the Specification states that "between the corresponding cell source and the root of the spanning tree" includes locations at the root of the spanning tree. Claim 1 has been amended for clarity. This amendment is submitted not to reduce the scope of claim 1.

Claim 23 has been amended to depend from claim 21. Claim 29 has been amended to depend from claim 28.

The Applicant submits that all claims, as amended comply with 35 U.S.C. §112.

Claims indicated as being allowable

The Office Action indicates that claim 8 would be allowable if placed in independent form. This has been done by incorporating into claim 8 the features of claims 1, 6 and 7. The feature of claim 7 is not expressly recited since the feature of original claim 8 is a subset of the feature of claim 7.

Claim 8, as amended, is submitted to be in condition for allowance. New claims 37 to 42 depend from claim 8 and are submitted to be allowable for at least this reason.

Cited References

Cabletron's Securefast VLAN Operation Manual Version 1.8 (RFC 2643) and Cabletron's VLAN Hello Protocol Specification (RFC 2641) have been cited together with RFC 2642 (collectively the Cabletron materials) in relation to various claims. Applicant notes that the Cabletron materials are not directed specifically to detecting loss of connectivity in a direction from the leaf to the root of a spanning tree in a bridged network.

The Cabletron materials describe a system having the following characteristics:

- Keepalive messages announce the existence of a switch to its neighboring switches (RFC 2642, p. 4, sec. 1.3, definition of Interswitch Keepalive messages);
- Neighboring switches are switches that are attached to a common link (RFC 2642, p.5, end of page; also RFC 2643, p.4);
- According to the VLAN Hello protocol, each switch sends Keepalive messages out or each local port (RFC 2641, p. 2, sec 2.1) except for any ports that are in "standby" mode or ports that are in "access" mode (RFC 2641 p. 3 and p. 4);
- a single loop-free path (spanning tree) is used for the flooding of undirected interswitch control messages (RFC 2643, p. 7 middle);
- Keepalive messages are not undirected messages. Undirected messages are ISMP message types of 5, 7 and 8 (RFC 2643, p. 5, definition of "undirected messages") Keepalive messages are ISMP messages of type 2 (RFC 2641, sec. 3.2).

Compliance of Claims with 35 U.S.C. §102 and §103

Claims 1-6 and 9-11

Claim 1, as amended, recites "the connection passing through at least one intermediate node between the first and second nodes". This does not introduce new matter. Paragraph [0029] states that there can be "other nodes along the connections through which data flows on its way from the leaf nodes to the root node of the spanning tree".

The Cabletron materials fail to disclose or suggest this feature in the context of claim 1. The Cabletron Keepalive messages are delivered only to neighboring switches (see RFC 2642, p. 4, sec. 1.3, definition of Interswitch Keepalive messages). Neighboring switches are switches that are attached to a common link (see RFC 2642, p.5, end of page; also RFC 2643, p.4).

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Claims 2-6 and 9-11 depend from claim 1 and are submitted to distinguish the Cabletron references for at least this reason.

Claims 12-19

Claim 12, as amended, recites "sending from a source port at the first end of the virtual circuit OAM continuity checking cells at a rate of at least one OAM continuity checking cell per 2 seconds". This feature is similar to the feature of claim 8. The Applicant submits that claim 12 is therefore in condition for allowance.

Claims 13-19 depend from claim 12 and are submitted to be allowable for at least this reason.

Claims 20-24

Claim 20 recites "allowing the continuity checking packets to pass along the connection through at least one intermediate node between the node at the first end of the connection and the node at the second end of the connection;" This feature is similar to the feature discussed above in relation to claim 1. The Applicant submits that the Cabletron materials do not disclose or suggest this feature since the Cabletron Keepalive messages are delivered only to neighboring switches. Therefore, the Applicant submits that claim 20, as amended, is in condition for allowance.

Claims 21 to 24 depend from claim 20 and are submitted to be allowable for at least this reason.

Claims 25-35

Claim 25, as amended, recites that "the connection-based network comprises at least one intermediate node located along the connection between the packet source and the packet sink". This is similar to the feature of claims 1 and 20. The Applicant submits that the Cabletron materials do not disclose or suggest this feature since the Cabletron Keepalive messages are delivered only to neighboring switches. Therefore, the Applicant submits that claim 25, as amended, is in condition for allowance.

Claims 26 to 35 depend from claim 20 and are submitted to be allowable for at least this reason.

Claim 36

Claim 36, as amended recites "between generating the continuity checking cells and receiving the continuity checking cells, allowing the continuity checking cells to pass along the one of the connections through at least one intermediate node on the one of the connections, the intermediate node between the cell source and the cell sink". This feature is similar to the features of claims 1, 20 and 25 that are discussed above. The Applicant submits that the Cabletron materials fail to disclose or suggest this feature in the context of claim 36. Therefore, claim 36 is submitted to be in condition for allowance.

Conclusion

The Applicant submits that the foregoing amendments place this application in condition for allowance. The Applicant respectfully requests reconsideration and allowance of this application.

Respectfully submitted,

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